

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name:

Address:

City:

State: Zip Code:

B. DUNS No.

II. Is the applicant currently receiving EPA Assistance? ☒ Yes ☐ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☐ Yes ☒ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☐ Yes ☒ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))

☒ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)

☐ Yes ☒ No

- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.**

N/A

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.**

N/A

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Kerri M Vera

B. Title of Authorized Official

Tribal Chairman

C. Date

03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

| | | | |
|---------------------------|------------------------------------|-------------------------|---------------------|
| Name: | Prefix: Mr. | First Name: Neil | Middle Name: |
| | Last Name: Peyron | | Suffix: |
| Title: | Tribal Chairman | | |
| Complete Address: | | | |
| Street1: | 340 Reservation Road | | |
| Street2: | | | |
| City: | Porterville | State: | CA: California |
| Zip / Postal Code: | 93257 | Country: | USA: UNITED STATES |
| Phone Number: | 559/781-4271 | Fax Number: | |
| E-mail Address: | Neil.Peyron@tulerivertribe-nsn.gov | | |

Payee: *Individual authorized to accept payments.*

| | | | |
|---------------------------|--------------------------------------|----------------------------|---------------------|
| Name: | Prefix: | First Name: Xochitl | Middle Name: |
| | Last Name: Ramos | | Suffix: |
| Title: | Tribal CFO | | |
| Complete Address: | | | |
| Street1: | 340 Reservation Road | | |
| Street2: | | | |
| City: | Porterville | State: | CA: California |
| Zip / Postal Code: | 93257 | Country: | USA: UNITED STATES |
| Phone Number: | 559/781-4271 | Fax Number: | 559/781-4610 |
| E-mail Address: | Xochitl.Ramos@tulerivertribe-nsn.gov | | |

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

| | | | |
|---------------------------|--|--------------------------|---------------------|
| Name: | Prefix: | First Name: Shine | Middle Name: |
| | Last Name: Neito | | Suffix: |
| Title: | Tribal Vice Chairman/Interim Administrator | | |
| Complete Address: | | | |
| Street1: | 340 Reservation Road | | |
| Street2: | | | |
| City: | Porterville | State: | CA: California |
| Zip / Postal Code: | 93257 | Country: | USA: UNITED STATES |
| Phone Number: | 559/781-4271 | Fax Number: | 559/781-7271 |
| E-mail Address: | Shine.Neito@tulerivertribe-nsn.gov | | |

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: **Prefix:** **First Name:** **Middle Name:**

Last Name: **Suffix:**

Title:

Complete Address:

Street1:

Street2:

City:

State:

Zip / Postal Code:

Country:

Phone Number:

Fax Number:

E-mail Address:

Other Attachment File(s)

* Mandatory Other Attachment Filename:

Add Mandatory Other Attachment

Delete Mandatory Other Attachment

View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment

Delete Optional Other Attachment

View Optional Other Attachment

Project Narrative File(s)

* Mandatory Project Narrative File Filename:

Add Mandatory Project Narrative File

Delete Mandatory Project Narrative File

View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

Delete Optional Project Narrative File

View Optional Project Narrative File

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

| Grant Program Function or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New or Revised Budget | | |
|---|--|-----------------------------|--------------------|-----------------------|--------------------|--------------|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. Enhanced AQ Monitoring for Communities | | \$ | \$ | 500,000.00 | \$ | 500,000.00 |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. Totals | | \$ | \$ | 500,000.00 | \$ | 500,000.00 |

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SECTION B - BUDGET CATEGORIES

| 6. Object Class Categories | GRANT PROGRAM, FUNCTION OR ACTIVITY | | | | Total (5) |
|--|--|-----|-----|-----|---------------|
| | (1) | (2) | (3) | (4) | |
| | Enhanced AQ Monitoring for Communities | | | | |
| a. Personnel | \$ 64,662.00 | \$ | \$ | \$ | \$ 64,662.00 |
| b. Fringe Benefits | 19,389.00 | | | | 19,389.00 |
| c. Travel | 9,000.00 | | | | 9,000.00 |
| d. Equipment | 15,000.00 | | | | 15,000.00 |
| e. Supplies | | | | | |
| f. Contractual | 362,083.00 | | | | 362,083.00 |
| g. Construction | | | | | |
| h. Other | | | | | |
| i. Total Direct Charges (sum of 6a-6h) | 470,134.00 | | | | \$ 470,134.00 |
| j. Indirect Charges | 29,866.00 | | | | \$ 29,866.00 |
| k. TOTALS (sum of 6i and 6j) | \$ 500,000.00 | \$ | \$ | \$ | \$ 500,000.00 |
| 7. Program Income | \$ | \$ | \$ | \$ | \$ |

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| SECTION C - NON-FEDERAL RESOURCES | | | | |
|---|---------------|-----------|-------------------|---------------|
| (a) Grant Program | (b) Applicant | (c) State | (d) Other Sources | (e) TOTALS |
| 8. Enhanced AQ Monitoring for Communities | \$ 500,000.00 | \$ | \$ | \$ 500,000.00 |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. TOTAL (sum of lines 8-11) | \$ 500,000.00 | \$ | \$ | \$ 500,000.00 |

| SECTION D - FORECASTED CASH NEEDS | | | | |
|------------------------------------|-------------|-------------|-------------|-------------|
| Total for 1st Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| 13. Federal | \$ | \$ | \$ | \$ |
| 14. Non-Federal | \$ | | | |
| 15. TOTAL (sum of lines 13 and 14) | \$ | \$ | \$ | \$ |

| SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT | | | | |
|---|--------------------------------|------------|-----------|------------|
| (a) Grant Program | FUTURE FUNDING PERIODS (YEARS) | | | |
| | (b) First | (c) Second | (d) Third | (e) Fourth |
| 16. | \$ | \$ | \$ | \$ |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. TOTAL (sum of lines 16 - 19) | \$ | \$ | \$ | \$ |

| SECTION F - OTHER BUDGET INFORMATION | |
|--------------------------------------|------------------------------|
| 21. Direct Charges: 470,134 | 22. Indirect Charges: 29,866 |
| 23. Remarks: | |

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Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

03/25/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Tule River Tribal Council

* b. Employer/Taxpayer Identification Number (EIN/TIN):

94-1728348

* c. Organizational DUNS:

0584028430000

d. Address:

* Street1:

340 Reservation Road

Street2:

* City:

Porterville

County/Parish:

* State:

CA: California

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

93257-0589

e. Organizational Unit:

Department Name:

Environmental Protection

Division Name:

Tribal Environmental

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

* First Name:

Kerri

Middle Name:

* Last Name:

Vera

Suffix:

Title:

Department Director

Organizational Affiliation:

Tule River Tribal Council

* Telephone Number:

559/783-9984

Fax Number:

559/783/8932

* Email:

TULERIVERENV@YAHOO.COM

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

I: Indian/Native American Tribal Government (Federally Recognized)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities
Relating to the Clean Air Act

* 12. Funding Opportunity Number:

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Establishing Data-driven Community Mitigation Strategies for Climate Change and Air Quality on the
Tule River Indian Reservation

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

| | |
|---------------------|---|
| * a. Federal | <input type="text" value="500,000.00"/> |
| * b. Applicant | <input type="text" value="0.00"/> |
| * c. State | <input type="text" value="0.00"/> |
| * d. Local | <input type="text" value="0.00"/> |
| * e. Other | <input type="text" value="0.00"/> |
| * f. Program Income | <input type="text" value="0.00"/> |
| * g. TOTAL | <input type="text" value="500,000.00"/> |

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:

Manifest for Grant Application # GRANT13580585

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 18724 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16011 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24186 bytes)

3. Form SF424A-V1.0.pdf (size 22557 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22654 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 15894 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37420 bytes)

Attachments Included in Zip File (total 2):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1234-Attachments.pdf application/pdf (size 6266549 bytes)

2. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1235-Narrative.pdf application/pdf (size 7365494 bytes)

SUPPORT LETTERS



TULARE COUNTY
HEALTH & HUMAN SERVICES AGENCY

Timothy W. Lutz, MBA
Agency Director

Karen Haught, MD, MPH • County Health Officer • Public Health Branch

03/10/2022

Neil Peyron
Chairman
Tule River Tribe of California
340 N Reservation Rd
Porterville CA 93257

Re: Tule River Tribe EPA grant EPA-OAR-OAQPS-22-01 – Letter of Support

Dear Chairman Peyron,

As the Public Health Officer for Tulare County Department of Public Health, please accept this letter to support the Tule River Tribe in their application for the *EPA Enhanced Air quality Monitoring for Communities* grant project. With this grant, the project will focus on creating enhanced air quality monitoring and partnership building in an effort to reduce environmental health impacts, with a focus on wildfire smoke within the Tule River Reservation community.

We are aware that the Tule River Reservation encompasses approximately 16,000 acres of forestlands, which have faced enhanced wildfire threat due to drought conditions in recent years. We further understand that Reservation air quality is impacted severely during wildfire events, as it accumulates along the Reservation valley floor where the Tribal community is situated. As such, we respect and support the Tribe's desired efforts in taking steps to assess and mitigate such impacts however possible. We support their effort to enhance air quality monitoring, as well as develop networks for planning, capacity building and community awareness & participation.

Tulare County Department of Public Health is part of the Tulare County Health and Human Services Agency which also includes the Department of Human Services and the Department of Mental Health. Dr. Eric Coles, Tule River Tribal Public Health Officer, and I meet weekly to discuss public health matters in Tulare County and Tule River Reservation including the serious air quality concerns with wildfire smoke.

If you require more information about the Tulare County Department of Public Health and our support for Tule River Tribe's application, please contact us at (559) 624-8481 or khaught@tularecounty.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Karen Haught".

Karen Haught, MD, MPH
Tulare County Public Health Officer
Tulare County Department of Public Health
Tulare County Health and Human Services Agency

DEPARTMENT OF WATER RESOURCES

715 P Street, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



March 14, 2022

Chairman Neil Peyron
C.C. Kerri Vera, Director
Tule River Indian Tribe of California
P.O. Box 589
Porterville, California 93257

Subject: Letter of Support for the Tule River Indian Tribe of California Application for Enhanced Air Quality Monitoring for Communities

Dear Chairman Peyron,

The Department of Water Resources (DWR) Office of Tribal Policy Advisor (OTPA) is pleased to write a letter of support for the Tule River Indian Tribe of California's application for Enhanced Air Quality Monitoring for Communities as funded by the Environmental Protection Agency. The OTPA strongly supports the Tribe's application and the focus on reducing community health risks posed by wildfire smoke exposure, including imparities to COVID-19, by developing Tribal community-based ambient air quality monitoring infrastructure.

As you may already know, the DWR OTPA is dedicated to conducting meaningful consultation and communication with California Native American Tribes. The inclusion of tribes and tribal communities fosters effective collaboration to make decisions based on common values including restoration, protection, and management of the California's natural resources for current and future generations.

The DWR OTPA recognizes the Tule River Indian Tribe of California has been an active proponent of these values as evidenced by the Tribe's on-going participation and negotiation in federally reserved Water Rights and continued communication with our department. Clean air and water are vital for the health and continued growth of the tribal community and neighbors.

Thank you for being active members of the community by pursuing funds to care and tend for California's natural resources.

Respectfully,

A handwritten signature in black ink, appearing to read 'Anecita Agustinez'.

Anecita Agustinez
Tribal Policy Advisor
CA Department of Water Resources

March 25, 2022

Neil Peyron
Chairman
Tule River Tribe of California
340 N Reservation Rd
Porterville CA 93257

Re: Tule River Tribe EPA grant EPA-OAR-OAQPS-22-01 – Letter of Support

Dear Chairman Peyron,

On behalf of myself, Kellie Carrillo, please accept this letter to support the Tule River Tribe in their application for the *EPA Enhanced Air quality Monitoring for Communities* grant project. With this grant, the project will focus on creating enhanced air quality monitoring and partnership building in an effort to reduce environmental health impacts, with a focus on wildfire smoke within the Tule River Reservation community.

I am personally aware that the Tule River Reservation encompasses approximately 16,000 acres of forestlands, which have faced enhanced wildfire threat due to drought conditions in recent years. I also further understand that Reservation air quality is impacted severely during wildfire events, as it accumulates along the Reservation valley floor where the Tribal community is situated. As such, I respect and support the Tribe's desired efforts in taking steps to assess and mitigate such impacts however possible. I support their effort to enhance air quality monitoring, as well as develop networks for planning, capacity building and community awareness & participation.

My personal experience has been to serve on the Porterville City Council, as the Vice Mayor and numerous local government committees, also studying numerous reports regarding water, drought and air quality data and other information. I am aware of efforts in various capacities towards solutions that include resources, partnerships and funding opportunities, so I see this project as a viable opportunity for additional support to monitor and address air quality for the community on the reservation that will impact children, elders and families. During my time working with Owens Valley Career Development Center as the Deputy Director, we had to also seek funding opportunities for temporary solutions to the air quality as we serve numerous Tribes and communities within the Central valley of California, where wildfires and other environmental health concerns exist. I feel this project is imperative for the Tule River Tribe and its community, especially at this time.

If you require more information about my experience or my support, please contact myself at email: kcarrillo00@hotmail.com, cell (661) 912-6724.

Sincerely,



Kellie Carrillo
Tule River Tribal Member
Deputy Director of OV CDC



CALIFORNIA RURAL INDIAN HEALTH BOARD, INC.

March 20, 2022

Neil Peyron
Chairman
Tule River Tribal Council
340 North Reservation Road
Porterville, CA 93257

Dear Mr. Peyron,

I write on behalf of the California Rural Indian Health Board in strong support of the Tule River Tribe's proposal to the Environmental Protection Agency for the grant, "Enhanced Air Quality Monitoring for Communities" (EPA-OAR-OAQPS-22-01). This funding will be used to create an air quality monitoring network that will help reduce environmental health disparities for the Tule River community.

We believe that a network of air quality monitors, outreach to the Tribal community members on its importance and use, and laying the groundwork for a coalition to build community resilience and response is timely considering California's expanding and escalating wildland fire seasons. The recent 2021 wildland fire in Tulare County underscores how vulnerable our Tribal communities are, especially for our elders in face of such threats.

In line with our decades of partnership with the Tule River Tribe, our Medical Director, Thomas J. Kim, has joined Stanford University and RTI International researchers to support your team in the following ways:

- Assisting preparation of the grant application and project design,
- Onsite support in community education and outreach,
- Arranging support from other organizations such as the California Department of Public Health (CDPH), Environmental Health Laboratory, and the CDPH Environmental Health Investigations Branch where Dr. Kim was previously a CDC assignee, and
- Providing a clinical/medical perspective and expertise on health impacts.

We look forward to continuing our partnership with you in protecting the community members of Tule River and achieving our shared goal of health equity.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mark LeBeau".

Mark LeBeau, Ph.D., M.S.
Chief Executive Officer

1020 Sundown Way, Roseville, CA 95661
Phone: 916-929-9761 · Fax: 916-771-9470 · www.crihb.org



TOMÁS J. ARAGÓN, MD, DrPH
Director and State Public Health Officer

State of California—Health and Human Services Agency
California Department of Public Health



GAVIN NEWSOM
Governor

March 4, 2022

Neil Peyron
Chairman
Tule River Tribal Council
340 North Reservation Road
Porterville, CA 93257

Dear Mr. Peyron,

I am writing on behalf of the Environmental Health Laboratory Branch (EHLB) of the California Department of Public Health in support of your proposal to the Environmental Protection Agency Request for Applications, "Enhanced Air Quality Monitoring for Communities" (EPA-OAR-OAQPS-22-01).

The proposed work will create a local air quality monitoring network to better assess wildfire smoke threats, as well as inform and enable interventions to reduce environmental health disparities for the Tule River community.

EHLB values the potential of this project to improve wildfire smoke exposure measurements and better inform guidance for vulnerable communities by incorporating chemical speciation, health-relevant exposure durations, and understanding of local terrain impacts.

Dr. Jeff Wagner from the EHLB Air Quality Section is an expert on airborne particulate matter (PM) who has assisted with previous California Tribal PM health concerns in partnership with proposal team member Dr. Thomas J. Kim, Medical Director of the California Rural Indian Health Board. Dr. Wagner will support your team by providing technical consultation on wildfire smoke measurement study design and PM exposure assessment.

EHLB is looking forward to assisting in this cross-disciplinary effort to address the health hazards of wildfire smoke in this community.

Sincerely,

Kazukiyo Kumagai, Ph.D.
Branch Chief (Acting), Environmental Health Laboratory Branch

CDPH Environmental Health Laboratory Branch
850 Marina Bay Parkway (Mailcode G-365) • Richmond, CA 94804
(510) 620-2801 OFFICE • (510) 620-2825 FAX
www.cdph.ca.gov/EHL



PARTNER COMMITMENT LETTERS



Office of Research Contracts

3040 Cornwallis Road * PO Box 12194 * Research Triangle Park, NC 27709-2194 * USA
Telephone 919.541.6000 * Fax 919.541.7148 * www.rti.org

March 24, 2022

Tule River Tribe
Attn: Kerri Vera
Via email: kerri.Vera@tulerivertribe-nsn.gov

Subject: RTI Support for Tule River Tribe's Project in response to EPA-OAR-OAQPS-22-01 Entitled, "Establishing Data-drive Community Mitigation Strategies for Climate Change & Air Quality on the Tule River Indian Reservation"

Dear Ms. Vera,

Research Triangle Institute (d/b/a RTI International) is pleased to confirm our support to serve as a subrecipient to Tule River Tribe for the subject opportunity. We propose to perform these services over a period of performance commencing on or about October 1, 2022, through September 30, 2025, for an amount of \$235,862. The requested supporting documentation is enclosed for your review

Should this proposal be awarded, RTI would be pleased to negotiate a subaward containing mutually agreeable terms and conditions. Should you have any questions regarding this submission, please do not hesitate to contact me at kehayes@rti.org or 919-541-7482. This offer shall remain valid for a period of 120 days. We look forward to working with you on this endeavor.

A handwritten signature in cursive script, appearing to read 'Katie Hayes'.

Katie Hayes
Senior Contracting Officer
919-541-7482
kehayes@rti.org
2200.470



3040 E. Cornwallis Road • PO Box 12194 • Research Triangle Park, NC 27709-2194 • USA
Telephone +1.919.541.6000 • Fax +1.919.541.5935 • www.rti.org

March 23, 2022

Email: Kerri.Vera@tulerivertribe-nsn.gov

Project Title: Establishing Data-driven Community Mitigation Strategies for Climate Change & Air Quality on the Tule River Indian Reservation

Dear Ms. Vera:

I am pleased to confirm my availability and commitment to support your proposal to EPA (RFA number EPA-OAR-OAQPS-22-01) and thank you for the opportunity to have members of my team participate in this collaboration with you. I am enthusiastic about this proposal, which aims to build air quality monitoring capability for Tule River Indian Tribe through partnerships between the tribal community, government stakeholders, and research institutes.

As Co-Investigator to the project, I will lead RTI's research activities and manage financial milestones. For technical work, RTI team will assist in designing, preparing, and executing air quality monitoring study, leveraging our existing air quality monitoring expertise. We will train tribal community staff for air sample and data collection, perform air sample analysis, and assist in air quality data analysis and interpretation. To assist study outcome dissemination efforts, we will participate in stakeholder meetings, provide technical inputs for community outreach activities, and contribute to reports, manuscripts, and presentation development. I believe my multidisciplinary collaboration, project management experience, and technical expertise in air quality and exposure monitoring through various environmental exposure and health studies including two EPA STAR grant studies make me uniquely qualified to contribute to and achieve the goals of the proposed study.

I look forward to working with the project team on this initiative, and if you have any questions, please contact me directly at scho@rti.org or 919-541-6761.

Sincerely,

A handwritten signature in cursive script, reading "Seung-Hyun Cho".

Seung-Hyun Cho
Research Aerosol Engineer and Exposure Scientist
Air Quality and Exposure
Research Triangle Institute

BIOGRAPHICAL SKETCH

| NAME: Cho, Seung-Hyun | | POSITION TITLE | |
|---|----------|---------------------------------------|--|
| INSTITUTION/ORGANIZATION | | Principal Exposure Research Scientist | |
| RTI International | | | |
| EDUCATION/TRAINING | | | |
| INSTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
| Korea University, Sejong, South Korea | BA | 02/1997 | Env. Science/Engineering |
| Gwangju Institute of Science and Technology, Gwangju, South Korea | MS | 02/1999 | Env. Science/Engineering |
| University of Cincinnati, OH | PhD | 09/2005 | Environmental Health |
| U.S. Environmental Protection Agency, Research Triangle Park, NC | Postdoc. | 10/2009 | Exposure Science and Inhalation Toxicology |

A. Summary of Qualification

Dr. Seung-Hyun Cho is a Principal Exposure Research Scientist in RTI International's Air Quality and Exposure (AQE) Program. During the past 15 years, Dr. Cho leads interdisciplinary studies to assess the linkages between air pollution exposures and adverse health outcomes with comprehensive source-emission-chemistry-transport-exposure-dose-response paradigm. Her research often integrates modeling, laboratory, and field studies to improve exposures assessment. Currently, Dr. Cho as PI of a grant project for a U.S. Environmental Protection Agency (EPA) Science to Achieve Results (STAR) Air Pollution Monitoring for Communities Program, leads a citizen science effort in which individuals use low-cost sensors to measure air quality in their communities and personal exposures to particulate matter (PM). She has been leading or involved in several other exposure-health effect studies to address impact of air pollution exposures, supporting government research programs, including EPA, CDC, NIEHS, NHLBI, NICHD, FDA, and Korea Ministry of Environment, and private clients such as Bill and Melinda Gates Foundation.

B. Positions

2010–date Principal Exposure Research Scientist, RTI International, RTP, NC, USA

C. Selected Honors and Awards

2010, 2012 Honorable Mention, EPA Scientific and Technological Achievement Awards

2008–2009 EPA Bronze Medal for Commendable Service Award, EPA's Annual Office of Research and Development Honor Award*

* Contributions were recognized for these EPA awards, but I was not eligible due to non-U.S. citizenship.

D. Selected Peer-Reviewed Publications (representative sample from 34 peer-reviewed publications)

Ye, W., Saikawa, E., Avramov, A., Cho, S-H., & Chartier, R. (2020). Household air pollution and personal exposure from burning firewood and yak dung in summer in the eastern Tibetan Plateau. *Environmental Pollution*, 263(Part B), 114531.

Park, J., Ryu, H., Kim, E., Choe, Y., Heo, J., Lee, J., Cho, S-H., Sung, K., Cho, M. and Yang, W. (2020). Assessment of PM_{2.5} population exposure of a community using sensor-based air

- monitoring instruments and similar time-activity groups. *Atmospheric Pollution Research*, 11(11), pp.1971-1981.
- Cox, J., **Cho, S-H.**, Ryan, P., Isiugo, K., Ross, J., Chillrud, S., et al. (2019). Combining sensor-based measurement and modeling of PM2.5 and black carbon in assessing exposure to indoor aerosols. *Aerosol Science and Technology*, 53(7), 817-829.
- Cho, S-H.**, Chartier, R. T., Mortimer, K., Dherani, M., & Tafatatha, T. (2016). A personal particulate matter exposure monitor to support household air pollution exposure and health studies. In *2016 IEEE Global Humanitarian Technology Conference (GHTC)* (pp. 817-818).
- Hays, M.D., **Cho, S-H.**, R. Baldauf, J.J. Schauer, and M. Shafer. (2011). Particle size distributions of metal and non-metal elements in an urban near-highway environment. *Atmospheric Environment* 45:925-934.
- Cho, S-H.**, J.I. Yoo, A.T. Turley, C.A. Miller, W.P. Linak, J.O.L. Wendt, F.E. Huggins, and M.I. Gilmour. (2009). Relationships between composition and pulmonary toxicity of prototype particles from coal combustion and pyrolysis. In *Proceedings of the Combustion Institute* 32:2717-2725.
- Cho, S-H.**, H. Tong, J. McGee, R. Baldauf, Q. Krantz, and M. Gilmour. (2009). Comparative toxicity of size-fractionated airborne particulate matter collected at different distances from an urban highway. *Environmental Health Perspectives* 117(11):1682-1689.
- Complete List of Published Work:** <https://www.ncbi.nlm.nih.gov/sites/myncbi/seung-hyun.cho.1/bibliography/54990124/public/?sort=date&direction=ascending>

E. Selected Research Support

- | | | |
|--|-----------------------|--------------------|
| NIEHS 1R21ES030142-01A1 | Ryan/Cho (PI) | 05/2020 to 04/2022 |
| The grant's aim is to understand the link between children's ultrafine and fine PM exposures and asthma exacerbation, using high resolution data from portable air pollution sensors. | | |
| EPA STAR 83618701 | Cicutto/Cho (PI) | 05/2016 to 04/2021 |
| The grant's aim is to understand how communities and individuals use low-cost sensors to collect, analyze, and interpret air quality data to address their concerns or support behavior changes to reduce air pollution exposures. | | |
| RTI Project 0216705 | Yang (Cho: RTI PI) | 08/2018 to 12/2020 |
| The project's goal is to develop an environmental health surveillance system to predict environmental health risk caused by air pollution exposures and provide early alert system. Funded by Korea Ministry of Environment. | | |
| NHLBI 1P01HL132821-01A1 | Voelker (PI) | 09/2017 to 8/2022 |
| The study is to understand nasal epithelial cell RNA expression of exacerbation prone asthmatics with different phenotypes for air pollution exposures. Role: Exposure data analyst | | |
| NIH, NICHD HHSN275201300026I- | Sherman (Cho: RTI PI) | 09/2014 to 09/2018 |
| HHSN27500005 | | |
| The study's aim was to investigate the changes in maternal asthma control related to inflammation, immune function, environmental exposure to air pollution, and lifestyle factors. | | |
| NIEHS P01 ES-018181 | Schwartz (PI) | 07/2014 to 07/2017 |
| The study's aim was to determine the linkage between exposures to various air pollutants and asthma exacerbation in inner-city children in Denver, CO. Role: Exposure study lead | | |
| RTI Project 0215153 | Multiple PIs | 11/2015 to 12/2018 |
| This Bill and Melinda Gates Foundation research program aims to measure the benefit of cookstove intervention on children's health in developing countries. Role: Exposure data analyst | | |

OTHER SUPPORTING DOCUMENTS

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read instructions before completing form.

This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2030-0020). Responses to this collection of information are required to obtain an assistance agreement (40 CFR Part 30, 40 CFR Part 31, and 40 CFR Part 33 for awards made prior to December 26, 2014, and 2 CFR 200, 2 CFR 1500, and 40 CFR Part 33 for awards made after December 26, 2014). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The public reporting and recordkeeping burden for this collection of information is estimated to be 0.5 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates and any suggested methods for minimizing respondent burden to the Regulatory Support Division Director, U.S. Environmental Protection Agency (2821T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name:

Address:

City:

State: Zip Code:

B. Unique Entity Identifier (UEI):

C. Applicant/Recipient Point of Contact

Name: Phone: Email:

Title:

II. Is the applicant currently receiving EPA Assistance? ☒ Yes ☐ No

III. List all pending civil rights lawsuits and administrative complaints filed under federal law against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints, unless covered by 40 C.F.R. Parts 5 and 7.)

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that alleged discrimination under federal law based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints, unless covered by 40 C.F.R. Parts 5 and 7.)

V. List all civil rights compliance reviews of the applicant/recipient conducted under federal nondiscrimination laws by any federal agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☒ Yes ☐ No

b. Is the notice posted in a prominent place on the applicant's/recipient's website, in the offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☒ Yes ☐ No

- VII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or disability status of the population it serves? (40 C.F.R. 7.85(a)) ☒ Yes ☐ No
- VIII. Does the applicant/recipient have a policy/procedure for providing meaningful access to services for persons with limited English proficiency? (Title VI, 40 C.F.R. Part 7, *Lau v Nichols* 414 U.S. 563 (1974)) ☐ Yes ☒ No
- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.

Lisa May, Executive Vice President, Human Resources, 3040 E. Cornwallis Road, Research Triangle Park, NC 27709-2194, lmay@rti.org, No fax number, 919-541-6524

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or applicant's/recipient's website address for, or a copy of, the procedures.

Please see RTI's Policy and Procedure attached.

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

B. Title of Authorized Official

C. Date



Sr. Contracting Officer

02/18/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date


General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any State or its political subdivision, any instrumentality of a State or its political subdivision, any public or private agency, institution, organizations, or other entity, or any person to which Federal financial assistance is extended directly or through another recipient, including any successor, assignee, or transferee of a recipient, but excluding the ultimate beneficiary of the assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means: any federal agency-initiated investigation of a particular aspect of the applicant's and/or recipient's programs or activities to determine compliance with the federal non-discrimination laws. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification.

Policy Details

Item XI Confidential

| | |
|----------------------------------|---|
| Topic: | 4.0 Employment Practices |
| Title: | 4.3 Prohibition and Prevention of Harassment, Discrimination, and Retaliation  |
| Current Revision Effective Date: | 10/20/2014 |
| Original Effective Date: | 06/01/1990 |
| Contact: | HR Help |
| What's New: | Added "gender identity" to the list of classes that will be free from harassment and other discrimination. |
| Old P&P Number: | 2100 |

Policy Statement

It is the policy of RTI to provide a work environment that supports treatment of all employees with dignity and respect and is free of threatening, harassing, or intimidating conduct. This policy also provides procedures for the reporting and investigation of harassment and discrimination claims in order to ensure that violations are remedied fully.

RTI International is committed to providing a work environment free of all forms of harassment. This includes sexual harassment as well as harassment or other discrimination based on race, creed, color, religion, sex (including pregnancy), age, marital status, sexual orientation, gender identity, national origin or citizenship status, disability, veteran status, or any other characteristic protected by law or RTI policy. Employees are prohibited from harassing other employees or other individuals in the work environment. RTI will take appropriate measures to correct any violations, up to and including termination.

Retaliation against employees who report perceived harassment or discrimination or participate in investigations of complaints as witnesses or other capacities also violates this policy and is strictly prohibited. Any suspected retaliation should be reported under this policy for immediate investigation.

Persons Affected

All RTI International staff and third parties

Definitions

Harassment: Verbal, written, or physical conduct that denigrates, slanders, or shows hostility toward an individual because of his or her race, creed, color, religion, sex (including pregnancy), age, marital status, sexual orientation, national origin or citizenship status, disability, veteran status, or that of

his/her relatives, friends, or associates. Harassment has the purpose or effect of creating an intimidating, hostile, or offensive working environment or unreasonably interfering with an individual's work performance; or otherwise adversely affects an individual's employment opportunities.

Examples of harassing conduct include, but are not limited to, the following:

- Epithets; slurs; negative stereotyping; or threatening, intimidating, or hostile acts that relate to race, creed, color, religion, sex (including pregnancy), age, marital status, sexual orientation, national origin or citizenship status, disability, veteran status, or that of relatives, friends, or associates.
- Written or graphic material that denigrates, slanders, or shows hostility toward an individual or group because of race, creed, color, religion, sex (including pregnancy), age, marital status, sexual orientation, national origin or citizenship status, disability, veteran status, or that of relatives, friends, or associates, and that is placed on walls, bulletin boards, or elsewhere on Company premises, or circulated in the workplace.

Similarly, sexual harassment involves the following:

- Making submission to or rejection of unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature a term or condition of employment or the basis for employment decisions; or
- Creating an intimidating, offensive, or hostile work environment by such conduct.

The following are examples, but not an exclusive list, of sexual harassment:

- Verbal – sexual innuendo, suggestive comments, insults, threats, jokes about gender-specific traits, or sexual propositions
- Nonverbal – making suggestive or insulting noises, leering, whistling, or making obscene gestures
- Physical – touching, pinching, brushing the body; coercing sexual activity; or assault

Discrimination: Any policy or action taken related to all terms and conditions of employment, including recruiting, selection, hiring, promotion, pay, job assignment, or training practices, which results in an unfair disadvantage to either an individual or group of individuals who are considered part of a protected class by law or by RTI policy.

Retaliation: Any conduct that is reasonably likely to prevent the exercise of an employee's rights to report a claim of harassment or discrimination or to participate in an investigation as a witness or in another capacity. Examples of retaliation include threats, transfers, reprimands, negative performance evaluations, harassment, and other adverse treatment.

Procedures Hide Procedure Statements

4.3.1 Reporting Harassment or Discrimination

An employee who believes he or she has experienced harassment or discrimination is encouraged to inform the offending individual directly that he or she finds the conduct unwelcome and ask that it stop at once.

If the treatment continues or if the employee is uncomfortable in informing the alleged harasser or discriminator directly, the employee should report the incident directly to any of the individuals listed below:

- The employee's supervisor or any member of management
- A Human Resources (HR) Business Partner
- The Chief Ethics Officer (via the Ethics Helpline 1-877-212-7220 or email Ethics@rti.org)
- The Employee Relations Center of Excellence (via email employeerelations@rti.org)

Anyone experiencing, witnessing, or otherwise involved in an incident of discrimination, harassment, or retaliation prohibited by this policy is required to cooperate fully.

This policy does not require that an employee report to his or her manager or supervisor, the alleged harasser or discriminator, or to anyone who is believed to be participating in the objectionable behavior. Rather, he or she may choose among those listed above with whom he or she is most comfortable in speaking about the behavior.

Any supervisor, manager, or executive who becomes aware of an incident of discrimination or harassment is responsible for immediately reporting the incident to HR. Failure to act accordingly will result in disciplinary action, up to and including termination.

All reports of alleged harassment, discrimination, or retaliation will be promptly investigated by HR.

Any employee found to have engaged in any form of discrimination, harassment, or retaliation will be subject to disciplinary action, up to and including termination.

There will be no retaliation against anyone making a complaint, in good faith, regarding discrimination and/or harassment. However, anyone found to have made a deliberate, false accusation of a violation of this policy will be subject to disciplinary action, up to and including termination.

4.3.2 Confidentiality of Information

RTI wishes to create a safe work environment in which individuals are not afraid to discuss concerns and complaints. The confidentiality of the information received, the privacy of the individual(s) involved, and the wishes of the complaining person regarding action by RTI will be protected as much as practicable. Confidentiality will be maintained by RTI and those involved in the investigation, and information will be shared only on a need-to-know basis.

4.3.3 Local Laws Concerning Prohibition and Prevention of Harassment, Discrimination, and Retaliation

RTI is a large organization with operations and employees located in a number of different countries. Some countries or jurisdictions have laws addressing prohibition and prevention of harassment, discrimination, and retaliation for employees located in that jurisdiction. RTI will adhere to all laws applicable to its employees in those jurisdictions.

PROJECT TITLE:

**ESTABLISHING DATA-DRIVEN COMMUNITY MITIGATION STRATEGIES
FOR CLIMATE CHANGE AND AIR QUALITY
ON THE TULE RIVER INDIAN RESERVATION**

APPLICANT ORGANIZATION:

Tule River Tribe of California
340 Reservation Road
Porterville CA 93257

PRIMARY CONTACT:

Kerri Vera, Director
Tribal Department of Environmental
Protection
559/783-9984
tuleriverenv@yahoo.com

DUNS NUMBER:

0584028430000

SET ASIDE:

Tribal Set-Aside

DESCRIPTION OF APPLICANT ORGANIZATION:

The Tule River Tribe of CA is a Federally Recognized Indian Tribe located in the southern Sierra Nevada, and is comprised of various bands of Yokuts Indians of the Central Valley and Sierra Foothills. The Tribe is governed by a Tribal Council which oversees various community service departments, including the Department of Environmental Protection. The Department of Environmental Protection's mission is to safeguard the Tribal community health through environmental protection and enhancement, and oversees several EPA-based programs in this effort, including water pollution prevention (CWA 106), non-point source protection (CWA 319) and the General Assistance Program (GAP).

PROJECT PARTNERS:

Partner Organization:

Tule River Public Health
Authority

Primary Contact:

Dr. Eric Coles DrPH
Tribal Public Health Officer
email: Eric.Coles@crihb.org

Partner Organization:

California Rural Indian
Health Board

Primary Contact:

Thomas Kim, MD, MPH
California Rural Indian
Health Board
email: tkim@crihb.org
ph: 916/468-9210

Partner Organization:

RTI International

Primary Contact:

Seung-Hyun Cho, PhD
Research Aerosol Engineer
email: scho@rti.org
ph: 919/541-6761

Partner Organization:

Stanford University

Primary Contact:

Gabrielle Wong-Parodi
Assistant Professor
Earth System Science
Center Fellow, Woods
Institute for the
Environment
email: gwongpar@stanford.edu

PROJECT LOCATION:

Tule River Indian
Reservation
340 N. Reservation Road
Porterville CA 93257

AIR POLLUTION SCOPE:

Target air pollutants are
PM, MP species, O3 & NO2

BUDGET SUMMARY:

\$500,000.00

PROJECT PERIOD:

October 2, 2022 to
September 30, 2025

PROJECT DESCRIPTION:

This project will establish community air quality monitoring, data collection and community engagement in an effort to assess and mitigate impacts of climate change and wildfire smoke, on the Tule River Indian Reservation. A collaborative effort will be initiated, with technical partners and Tribal representatives to create awareness, begin responsive actions and ultimately establish a permanent air quality monitoring station for the Tribal community. The intent for this project is to address climate change, specifically increased wildfire smoke impacts, through community team building and professional partnership development and collaboration.

Section 1 – Project Summary and Approach (30 total possible points)

A. Overall Project (20 possible points)

Activity 1 – Develop & Implement Longitudinal Ambient AQ Monitoring

This activity is to longitudinally monitor ambient air quality of PM_{2.5}, gaseous pollutants, and heat during a two-year monitoring period, including two wildfire seasons. This is the first time opportunity to collect multi-pollutants and climate data within Tule River Tribal community at high spatial and temporal resolutions. This data collection is to create and administer data-driven planning and policy development in effort to enhance public health, emergency management and communication within the Tule River Reservation community. Specifically, the Project Team will utilize a low-cost sensors network with previously validated sensors within the community to collect data of real-time PM_{2.5} and its chemical species, including black carbon, UV absorbing PM, and oxidative potential; and gaseous pollutants, including NO₂ and O₃. PurpleAir II sensors will measure PM_{2.5} concentrationsⁱ [reference]. RTI MicroPEMs will be colocated and collect integrated filter (PTFE) samples for chemical speciation while measuring real-time PM concentrations, temperature, and relative humidityⁱⁱ [reference]. NO₂ and O₃ will be monitored using Ogawa passive monitorsⁱⁱⁱ [reference].

Step 1) Pilot Study Planning: Based on need, location and feasibility, begin equipment placement within the Tule River Tribal community. This will establish an air quality monitoring system, for first monitoring pilot effort. RTI will provide technical expertise, guidance and training to Tribal staff of the Tribal Department of Environmental Protection, for equipment placement, operation, maintenance and data gathering protocol. To accomplish this, the Project Team, Community Advisory Committee, and external experts (for example: San Joaquin Valley Air Pollution Control District and California Department of Public Health) will collaborate and discuss project timeline, site selection, resource support and training needs. The project team and technical experts will review the terrain, local sources, public gathering locations to select the monitoring sites. Sites will be selected in an effort to optimize the air monitoring study protocols based on EPA Air Sensor Toolbox materials (<https://www.epa.gov/air-sensor-toolbox>) and existing protocols from EPA STAR grant studies, conducted by Stanford and RTI collaborators. Staff will be trained in the use of low-cost sensors, sample handling, chain of custody, metadata record keeping. The San Joaquin Valley reference monitor and all PA and MicroPEM sensors will be colocated to operate for a predetermined duration, to understand overall sensor performance under varying atmospheric conditions and a wide range of PM concentrations. This operation duration will be determined based on the initial project planning meeting and discussions.

Period: October 2022 - December 2022

Step 2) Pilot Study Execution: Develop pilot air quality monitoring program and deploy sensors, under guidance and cooperation with our RTI partners. Data collection protocol will follow guidance of applicable procedures, as established by RTI. RTI will work with associated Tribal staff to develop capacity in proper data collection, documentation, quality assurance and protocol compliance. This pilot study will include MicroPEM and Ogawa at a single site only, in order to validate applicable operating protocols.

Period: January 2023-March 2023

Step 3) Full Scale Longitudinal Study: Based on spatial variability of PM_{2.5} from pilot monitoring efforts, 5 (tentative) sites will be selected for a two-year longitudinal monitoring study. The full study starts with Baseline air quality monitoring and will be conducted during non-wildfire season. MicroPEMs will be colocated with PurpleAir sensors at all sites, to collect week-long PM samples in every other month for chemical speciation. Ogawa passive monitor data will be collected at the same schedule as MicroPEM, but only at the Tribal Dept. of Environmental Protection building based on the assumption that these gaseous pollutants are more homogeneously distributed without significant sources within the community. Monitoring of air quality with a specific focus on wildfire smoke, will commence during the general fire season period.

Periods: April-May 2023 & January-May 2024

Wildfire Period: July-December 2023 & July-December 2024

Step 4) Air Sample Analyses: RTI will analyze MicroPEM filters and Ogawa monitors. Gravimetric analysis will be performed for PM_{2.5} mass on the filters using a validated microbalance that can measure as low as 0.1 µg^{iv} [reference]. Subsequently, the filters will be optically analyzed with multi-wavelength integrating sphere for black carbon and UV absorbing PM^v [reference]. PM will then be extracted and analyzed for oxidative potential by using 2',7'-dichlorofluorescein (DCFH) assay, which can be oxidized non-discriminatorily by various reactive oxygen species as shown by a previous study^{vi} [reference]. RTI will also analyze the NO₂ and O₃ Ogawa monitors by High Performance Liquid Chromatography^{vii} [reference]. We will include quality assurance samples of field, shipping, and laboratory blanks in the analysis. We will implement a system approach to assess the validity of all sample data. We will monitor sample validity during preparation, deployment, retrieval, shipping, laboratory analysis, data quality assessment, and data reporting. We will assess completeness (i.e., protocol followed), accuracy, and precision for sample collection and analysis. Sample preparation, collection, retrieval, shipping, and analysis logs provide the metadata to assess completeness. We will assess accuracy and precision against laboratory standards, field and laboratory blank samples, and duplicate analysis.

Step 5) Data analysis and reporting: Prepare data for publication, from both years of monitoring. Data will be shared with collaborating partners, as applicable. Data will also be shared with the Tribal community engagement team through various efforts, such as materials and events, to promote community education, awareness and partnerships. We will produce publications for the following:

- a. Air quality and exposure in the Tribal community particularly during wildfire seasons
- b. Summary of how the Tribal community perceives their air quality before and after learning about the local monitoring data

Period: January 2024-December 2025

Step 6) Transition phase: We will begin transitioning away from RTI technical support immersion. RTI will provide assistance and training necessary to build final capacity with Tribal staff to ensure independent function in air quality monitoring, data management and equipment O&M. As time and costs permit, we will host a final project summary workshop, to include our community advisory committee, external experts and all associated collaborators.

Period: April 2025-September 2025

Step 7) Conduct an overall project analysis to identify lessons learned. This will be a necessary tool to assess successes as well as challenges, which will aid in moving forward and planning future efforts.

Period: Summer of 2025

Activity 2 – Socialize Significance, Importance and Validity of Air Quality Data to Tribal Community

This activity will be met by steps organized by the Tule River Environmental Department, Public Health Department, California Rural Indian Health Board, and experts at Stanford University. Activities will begin in October 2022 and extend through April 2025. This activity will consist of the following steps.

Step 1) Develop Community Focus Groups

Step 2) Community Surveys

Step 3) Think Aloud exercises

Step 4) Community presentations

*See Section 2 - Community Involvement for further details

Activity 3 – Develop Long-Term Sustainability Plan for Air Quality Monitoring on Tule River Reservation

Steps toward this activity will build on those in activity one, regarding establishing a monitoring system.

Step 1) RTI will work collaboratively with Tribal Department of Environmental Protection to ensure all procedural requirements are met, such as a Quality Assurance and data security plans. We will work together to develop and document framework to guide future air quality monitoring on the Reservation.

Period: January 2023-December 2023

Step 2) Project partners will work collectively to network and build relationships with applicable cooperators such as, but not limited to the following: San Joaquin Valley Air Pollution Control District, California Department of Health Environmental Department.
Period: In 2024

ⁱ <http://www.aqmd.gov/aq-spec/sensordetail/purpleair-pa-ii>

ⁱⁱ <http://www.aqmd.gov/aq-spec/sensordetail/micropem>

ⁱⁱⁱ Williams, R., Rea, A., Vette, A. *et al.* The design and field implementation of the Detroit Exposure and Aerosol Research Study. *J Expo Sci Environ Epidemiol* **19**, 643–659 (2009). <https://doi.org/10.1038/jes.2008.61>

^{iv} Lawless PA, Rodes CE. Maximizing data quality in the gravimetric analysis of personal exposure sample filters. *J Air Waste Manag Assoc.* 1999;49(9):1039-1049.

^v Lawless P. Multiwavelength absorbance of filter deposits for determination of environmental tobacco smoke and black carbon. *Atmospheric Environment.* 2004;38(21):3373-3383.

^{vi} Venkatachari P, Hopke PK. Development and laboratory testing of an automated monitor for the measurement of atmospheric particle-bound reactive oxygen species (ROS). *Aerosol Science and Technology.* 2008;42(8):629-635.

^{vii} Dutmer CM, Schiltz AM, Faino A, Rabinovitch N, Cho S-H, Chartier RT, Rodes CE, Thornburg JW, Liu AH. Accurate Assessment of Personal Air Pollutant Exposures in Inner-City Asthmatic Children. *Journal of Allergy and Clinical Immunology.* 2015;135(2):AB165.

Section 2 – Community Involvement (25 total possible points from Section V.A of the RFA. 35 possible points for applicants applying for community-based organization set-aside)

A. Community Partnerships (15 possible points)

The Tribal Department of Environmental Protection and partners have teamed up in an effort to socialize air quality monitoring amongst the Tribal community and establish an appropriate Tribal community-based engagement structure. Our team is comprised of Research Institute partners, Tribal government, Tribal Public Health Authority and the California Rural Indian Health Board. Our Research Institute partners are RTI International and the Stanford University Earth Systems Science Department, and they worked extensively in underserved communities with a specific focus on environmental health, wildfire smoke and community wellness and participation. They bring expertise in scientific protocols, practices, assessment & analysis as well as guidance for engaging Tribal community engagement in solutions-driven environmental health responses. Collaboratively we will focus on the following, within the Tule River Reservation community:

- (a) Understanding perceptions of air quality
- (b) Assess knowledge about the health and environmental impacts of poor air quality (for example: how poor air quality affects water quality)
- (c) Assess vulnerabilities to poor air quality
- (d) Identify different ways of effectively communicating about poor air quality and behaviorally realistic ways to reduce exposure.
- (e) We aim to understand the above through engaging community members in focus groups, surveys and other community activities which will also:
 - assess and communicate environmental health knowledge and health risks due to air quality
 - enhance their understanding of norms around air quality monitoring
 - assess support for establishing Tribal air quality monitoring
- (f) We will use the above findings to create an outreach campaign for Tribal community of air monitoring importance and the purpose of the monitoring system
- (g) Finally, lay the ground work for baseline data collection for a future study, leverage an existing air quality study design used in EJ community in Denver, CO (by our RTI partners)

*See Partnership Letters in Attachments

B. Community Engagement (10 possible points)

Activity 1 – Develop Tribal Community Focus Groups

Step 1) Conduct 10 focus groups with 6-8 community members. Focus group questions will be informed by our previous work eliciting perceptions about wildfires, wildfire smoke, and air quality in the context of air quality monitoring and effective behavioral response ⁱ. The focus groups will be audio-recorded and transcribed for analysis.

Step 2) The results of these focus groups will be used to inform the design of a survey (Task 2) that will be used to assess the prevalence of beliefs, preferences, and attitudes regarding air quality monitoring on the reservation, as well as the identification of those behaviorally realistic ways to reduce exposure and effective ways of communicating risks. The focus groups will also be used to inform the design of the visualizations and communication materials as described in activity 3.

Step 3) Visualization and communication materials will be further tested for understanding and usability using our method for assessing the usability of climate change decision aidsⁱⁱ.

Step 4) In response to information about poor air quality, we will assess social norms around air quality monitoring and behaviors to reduce risks.

Period: October 2022 – March 2023

Activity 2 - Community surveys

Here we seek to understand the prevalence of beliefs, preferences, and attitudes regarding air quality monitoring on the reservation, as well as the identification of behaviorally realistic practices to reduce exposure, and effective ways to communicate risks.

Step 1) The entire reservation will be solicited and encouraged to complete the survey.

Step 2) The responses will be summarized and used to inform the development of the follow-up focus group with the same individuals who participated during the first group.

Step 3) Data will be analyzed and written up for peer-review publication.

(April-December 2023)

Activity 3 - Think Aloud Protocol testing visualizations

Step 1) Create communications about air quality for Tribal members, using data obtained from the air quality monitors during the first wildfire season.

Step 2) Assess visualizations for understanding and usability following our method for assessing the usefulness of climate change decision aids.

Step 3) Evaluate visualizations using a Think Aloud Protocol ⁱⁱⁱ with approximately 5-10 members of the community.

Step 4) The created communications will be assessed during the follow up focus group sessions with our original set of focus group participants.

(January 2024-April 2024):

Activity 4 Focus Group Time 2

Step 1) Follow up with original focus group participants, to show them the two wildfire seasons worth of air quality data

Step 2) Assess and audio record focus group views on the same set of measures to understand how this type of information changed perceptions of: air quality, knowledge about the health and environmental impacts of poor air quality (e.g., how does poor air quality affect water quality?), vulnerabilities to poor air quality, and social norm perceptions about air quality monitoring and behaviors to reduce risks in response to information about poor air quality.

Step 3) Transcribe audio recordings for analysis.

Step 4) Conduct an assessment of how views have changed (or remained the same)

(October 2024-April 2025)

Activity 5: Community Presentations

Based on our prior community outreach experience and the above focus group findings, we will identify optimal ways of presenting the summary of our findings and reinforce key messages. This may be through an in-person and/or online Town Hall meeting which will include a Q & A. An accompanying fact sheet will also be distributed at key sites throughout the reservation (post office, Tribal clinic, government facilities) and also shared by Community Health Representatives.

Wong-Parodi, G. (2022). Support for public safety power shutoffs in California: Wildfire-related perceived exposure and negative outcomes, prior and current health, risk appraisal and worry. *Energy Research & Social Science*, 88, 102495.

Santana, F. N., Gonzalez, D. J., & Wong-Parodi, G. (2021). Psychological factors and social processes influencing wildfire smoke protective behavior: Insights from a case study in Northern California. *Climate Risk Management*, 34, 100351.

Qin, C., Xu, J., Wong-Parodi, G., & Xue, L. (2020). Change in public concern and responsive behaviors toward air pollution under the Dome. *Risk Analysis*, 40(10), 1983-2001.

Wong-Parodi, G., Dias, M. B., & Taylor, M. (2018). Effect of using an indoor air quality sensor on perceptions of and behaviors toward air pollution (Pittsburgh Empowerment Library Study): online survey and interviews. *JMIR mHealth and uHealth*, 6(3), e8273.

ⁱⁱ Wong-Parodi, G., Fischhoff, B., & Strauss, B. (2014). A method to evaluate the usability of interactive climate change impact decision aids. *Climatic change*, 126(3), 485-493.

ⁱⁱⁱ Jäskeläinen, R. (2010). Think-aloud protocol. *Handbook of translation studies*, 1, 371-374.

Section 3 – Environmental Justice and Underserved Communities (10 total possible points from Section V.A. of the RFA)

The proposed project serves as an effort to identify and quantify community environmental health threats, due to impaired air quality, to all residents of the Tule River Indian Reservation. We desire to establish communication and outreach with the Tribal community to foster a better understanding of environmental conditions, and empower mitigation planning and policy development for improved community health, in response to impaired air quality due conditions caused by climate change.

The Tule River Indian Reservation is situated approximately 12 miles east of the nearest city and services, with only one paved road leading to and from the Reservation. The paved road extends only for approximately 4 miles from west to east through the Reservation, and is met with an array of dirt roads, which branch off and lead to Tribal homes. This creates an isolated community, situated mostly along the river valley floor with other isolated homes located outside the valley, within the oak woodlands.

The Tribe hosts limited health and human services such as: Telecommunications, Tribal Health Clinic, Public Safety, Public Works, Environmental Protection and Structure/Wildland Fire Departments. These services are vital to the Tribal community, but extremely limited by lack of resources and communication capacity. The Reservation is comprised of approximately 1,100 Indigenous members, many of whom are below the poverty level or unemployed. As reported by the 2020 Census data, over 50% of Reservation residents aged 16 and over were either unemployed or not in the labor force (United States Census, 2021). Almost one-third (30.8%) of all Tribe members fall at 150% or higher, below the poverty line (Census Reporter, 2021).

Due to isolation and poverty status, the Tribal community lack adequate basic needs such as: access to food/groceries, gasoline, sufficient housing, public transportation, emergency and educational services. Tribal members cannot access total health care, including social services and reliable communication services (weak or unavailable internet and unreliable telephone services).

Residents are unable to afford upgrades to critical home systems related to air quality. This includes outdated, unserviced, broken, or otherwise compromised HVAC and air handling systems which leads to increased exposure to exterior particulate matter that otherwise would be filtered in a properly operating system. Many homes unable to afford modern HVAC systems also use outdated evaporative cooler technology which often exacerbates existing air quality problems. The Tule River Reservation's proximity to the sequoia national forest magnifies the adverse effects of the degraded physical infrastructure due to increased frequencies of catastrophic wildfires enhanced by climate change conditions. In 2021, covid-19 outbreaks often overlapped with impaired air quality from wildfire events.

Community members who are most vulnerable to covid-19 and impaired air quality would benefit from expanded and accurate information about environmental health conditions such as air quality, especially if they lack the financial means of accessing medical services or safer conditions. The impacts of impaired air quality, as well as covid-19, has only recently plagued the Tribe, thus has not been adequately addressed in policy decisions or sustainable planning to date. Though efforts were made to provide clean air stations within the community, this was limited or impossible due to recommended isolation practices implemented as a result of covid-19 spread.

Since the Tule River Indian Reservation air shed is unique in character, from those monitored in neighboring lands, this project offers an opportunity to collect and distribute air quality information specific to the Tribal community, which is a service that is currently unavailable. In addition, the proposed project would align itself with current plans of the Tribal Telecommunications Department to assist in providing accurate information about air quality indexes on a daily basis.

Section 4 – Environmental Results

A. Expected Project Outputs and Outcomes (10 possible points)

Activity 1 – Develop & Implement Longitudinal Ambient AQ Monitoring

Outputs:

Short Term

Identify the current air impairment problem, by confirming presence and concentration of PM 2.5, NO₂, NO₃, and O₃ within the Tribal community, with a specific focus on wildfire smoke

-Enhance Tribal knowledge and understanding of health impacts, due to impaired air quality.

Intermediate

-Increase interest in health impacts of poor air quality will influence community behavior to reduce exposure.

Long Term

-Reduce human exposure to certain air pollutants: Assessment of pollutants will allow Tribal leaders to better plan for and work toward implementing mitigation measures for Tribal community, in response to degraded air quality. Mitigation measures may include continued and enhance air quality monitoring as well as applicable structure improvements for indoor air quality.

Outcomes:

-Deployment of equipment to conduct air quality monitoring in or near underserved communities: air monitoring stations will be established directly within the underserved community of the Tule River Indian Reservation, where currently none exist.

-Identification of air pollution: air monitoring station will measure presence/absence and concentrations of select air pollutants.

-Community specific assessment of air pollution data: air quality data collection will be executed specifically to assess impairments within the Tule River Tribal community, with a focus on wildfire smoke and all associated impacts thereof.

-Near real-time air quality data available for communities and other stakeholders

Activity 2 – Socialize Significance, Importance and Validity of Air Quality Data to Tribal Community

Outputs:

Short Term

- Increase community awareness: This activity is focused at enhancing community education and awareness by data presentation, sharing and outreach.
- Increase access to information and tools that increase understanding and reduction of environmental and human health risks: This activity has a focus on using the best community-friendly tools to

Intermediate

- Community action to mitigate certain air pollutants: Through enhanced community awareness, this activity serves as a catalyst to persuade and encourage adjusted behavior, in response to potential health impacts. Community and Tribal leaders will be empowered to take action in creating safer spaces and conditions during poor air quality conditions.
- bring understandable data interpretation for awareness of air quality conditions and potential health impacts.

Long Term

- Reduction of human exposure to certain air pollutants: By influencing knowledge, behavioral changes and implementing mitigation measures to reduce exposure to poor ambient air quality, the Tribal community will have better options for enhanced conditions within the community.

Outcomes:

- Promotion of partnerships and community involvement through various activities and information exchanges: This activity is specifically focused on community engagement, partnership development and technical networking for the purposes of air quality monitoring, awareness and mitigation within the Tule River Reservation.

Activity 3 – Develop Long-Term Sustainability Plan for Air Quality Monitoring on Tule River Reservation

Outputs:

Short Term

- Problem identification: This activity will help to establish continued identification and quantification of air pollutants within the Tribal Community, through monitoring in accordance with established procedures and quality assurance protocols. Data will continue to be collected and analyzed so that conditions and trends can be assessed, documented and presented as applicable for education and planning purposes.

Intermediate

- State or local policy actions: As air quality data is documented and shared amongst Tribal leaders and local partners, appropriate reactive solutions and mitigation planning can begin.
- Community action to mitigate certain air pollutants: As data is rendered, analyzed and shared with the Tribal community and networks, appropriate measures can be developed to address and mitigate community exposure to specific air pollutants, as applicable; community participants will be empowered to be involved in problem solving for improving environmental health conditions.

Long Term

- Reduction of human exposure to certain air pollutants: As mitigation measures are implemented, and community awareness and participation is enhanced, the Tribal community will continue to execute practices that reduce their exposure to impaired air quality.

Outcomes:

- Continued ability to conduct air quality monitoring in or near underserved communities. Sustainable air monitoring stations will be established directly within the underserved community of the Tule River Indian Reservation, for continued ability to assess and respond to air quality conditions.
- Continued identification of air pollution. Sustainable Air monitoring stations will continue to measure presence/absence and concentrations of select air pollutants.
- Continued community specific assessment of air pollution data. Air quality data collection will continue being executed specifically to assess impairments within the Tule River Tribal community, with a focus on wildfire smoke to assess trends and conditions.

B. Performance Measures and Plan (5 possible points)

Project coordinator will track progress on proposed Steps and overall Activities on a quarterly basis, at minimum. The below format will be used for assessing and documenting progress. Each activity and associated steps will

be listed, and a narrative style of reporting will be entered into each associated box, addressing each point. The final column will allow for documenting a plan of action for activities or steps to be addressed next.

| Activity | Work Accomplished, Status | Target Date(s) Is Activity on Schedule? | Steps planned for next quarter |
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For financial tracking, the project coordinator will track, organize and file all expenditure requests and payment documentation. Expenditures will be reconciled monthly or quarterly at minimum, by comparing filed grant expenditure documents to expense reports recorded by Tribal Finance Department.

C. Timeline and Milestones (5 possible points)

| Activity | Year 6 | | | | | | | | | | | | Year 7 | | | | | | | | | | | | Year 8 | | | | | | | | | | | | |
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longitudinal data set of 10 years (2000-2009)

The sample collection time is subject to change based on actual events.

5.a Quality Assurance Statement

The project team, under the scientific & technical direction of RTI, will provide the EPA with superior quality research that meets the highest standards of professional performance, satisfies research requirements, and delivers exceptional value. PIs will oversee quality efforts and implement policies, procedures, and processes designed to ensure compliance with data quality principles.

5.a.1 Quality Assurance Approaches and Quality Assurance Officer

The research team will implement a quality system that ensures the scientific defensibility and technical accuracy of all work conducted under this grant and complies with American National Standard ASQ/ANSI E4:2014: Quality management systems for environmental information and technology programs. To meet this goal, the research team will develop quality management documents, including Quality Assurance Project Plans (QAPPs) and any other necessary planning documents (e.g., Standard Operating Procedures [SOPs], Data Collection Plans, requirements documents, design documents).

Department Director Kerri Vera, at the Tule River Tribal Department of Environmental Protection will serve as the project Quality Assurance Officer (QAO), assessing the overall quality of work by observing research activities and reviewing data and deliverables for Stanford and RTI International. Ms. Vera has more than 20 years of scientific research experience. Ms. Vera is currently the Director of the Tribal Department of Environmental Protection and has experience in implementation of surface water quality monitoring in accordance with affiliated, EPA approved QAPP. Ms. Vera will not be participating in this research project and thus has sufficient independence to function effectively and efficiently as the QAO.

Specifically, Ms. Vera will:

- Review and assist in the preparation and updating of QAPPs;
- Review and assist with the preparation of SOPs;
- Schedule, plan, and conduct Performance Evaluation Audits (PEAs) and Audits of Data Quality (ADQs) to support project activities (including collaborators);
- Provide QA reports to management on results of audits and corrective actions (including those for collaborators);
- Coordinate training activities that may be needed to improve data quality; and,
- Review audit reports, SOPs, and other products for quality components.

Each institute will also identify an independent quality control (QC) coordinator who will support each institute team with assessing data quality of individual research activities.

5.a.2 Quality Objectives and Evaluation

This study involves a longitudinal randomized controlled trial to test the efficacy of various exposure reduction approaches for wildfire smoke. Specifically, we hypothesize that low-income and non-English speaking households equipped with air filtration, air sealing, and messaging will have reduced indoor PM and health risks compared to their baseline and the control group. We have project milestones for individual research activities as described in Section 6.a.5 (Project Management). Key project milestones such as the completion of each phase will be discussed with the Community Advisory Committee throughout the project time period for study design, data collection plan, milestone accomplishment, study results, and results dissemination.

5.a.3 Project Elements

This study will proceed in three phases. During Phases 1 and 2, we will conduct 30 interviews and a pilot with 30 participants from the three communities of interest in the San Francisco Bay Area: East Palo Alto, North Fair Oaks, and San Jose. In the third Phase, we will collect data from a cohort of 265 participants from our areas of interest throughout the project time period.

Quality review will be performed every week for a random selection 5% of the surveys (~13 or 14 participants) for completeness during Phase 3 (Full Intervention) of the study. This protocol will be developed and refined during Phase 2 (Pilot Test and Further Tailoring) of the study. At the end of the study, all surveys will be manually reviewed for completeness.

Regarding the air quality and personal exposure data, QC samples to define the accuracy, precision, range, detection limit, resolution, completeness, and representativeness of the PM_{2.5} sensors will be collected to quantify the data quality indicator. The sensors will be also collocated at a rate of 5% and the acceptance limit will be 20% of the coefficient of variation. Shipping and field blanks of MicroPEM filter samples will be collected at a rate of 5% to monitor for contamination. Laboratory QC samples such as laboratory reference filter and standard weight will be also analyzed in every batch. The PurpleAir and MicroPEM data quality management procedure has been applied to NASA- and various NIH- and EPA-funded studies where those sensors are used to monitor air quality and personal PM exposures to achieve scientific rigor. All logged real-time PM data from MicroPEM will be downloaded and post-corrected using the corresponding gravimetrically determined concentration (gold-standard measurement). PurpleAir sensor's PM concentration and Emfit mattress sensor raw data will be wirelessly transmitted to the manufacturer's cloud server, processed with a validated algorithm, and downloaded to the study database. The ambient and indoor air quality data will be aggregated to multiple levels (i.e., hourly, daily, pre-/post-intervention phases) to examine temporal changes of indoor air quality, wildfire smoke infiltration to indoor homes, and ratio of indoor to outdoor PM level. Personal PM measurement together with time-activity diary will be examined to identify microenvironments with low or high PM levels to identify personal action steps. Sleep quality data will be aggregated to each pre- and post-intervention phase. []

5.b. Data Management Activities

We will maintain chain-of-custody records on all air samples, data files, surveys, and interview audio files and transcripts to track the sample/data collection, transport, storage, and processing activities starting when the samples/data have been generated. The Scientific Data Management Plan (Section 6.d) offers further details of data management plan.

We will assign field operation Record Quality Indicator (RQI) for field generated samples and data (including self-reported survey responses), and analytical RQI for PM_{2.5} MicroPEM filter samples. We will assign RQI 0 to records in which the sample or data itself or analytical results lack any evidence of compromise. These data are considered "acceptable." Alternatively, we will assign an RQI of 1 to the sample or data in which some aspect of the sample or data are not ideal, although still acceptable, because these carry an increased level of uncertainty. Finally, we will assign an RQI of 2 to the sample and data when physical or recorded evidence exists, indicating that the data integrity has been compromised and would not yield useable results.

All survey and measurement data and associated metadata and RQI will be stored in secure cloud servers: All survey data in a Stanford University server and STI server, and air quality and personal exposure data and sleep quality measurement data in RTI server. These data will be stored with de-identified participant ID (details are described in the Human Subjects Research Statement (Section 6.c)). With respect to the collection of self-reported survey data, any data safety and monitoring issues will be raised at monthly meetings with all researchers, and events will be reported as they occur. At the end of each interview, Dr. Wong-Parodi or her students will provide referrals for information about additional support. For the surveys, additional information about support

will be made available in the FAQ page. Any serious adverse events will be reported to the EPA project officer (PO) by email within 24 hours of the event. A more complete written report documenting the event must occur within 72 hours of the event. All adverse events will be reported by email to the EPA PO twice a year: six months after notice of grant award and at the end of the budget year.

For statistical analysis of personal exposure, ambient air quality data, and sleep quality data, we will use SAS v9.2 (SAS Inc., Cary, NC) to determine the pertinent descriptive statistics associated with the measured quantities and identify outliers in the validated database before conducting in-depth data analysis. For the survey data analysis, we will use STATA v15.1 (StataCorp, College Station, TX) that allows for the pre- vs. post-intervention analysis, as well as longitudinal analyses. For the interview data, the data will be transcribed (and translated to English from Spanish if appropriate) and coded using NVivo v12 (QSR International, Burlington, MA).

Section 6 – Programmatic Capability and Past Performance (15 total possible points from Section V.A. of the RFA)

A. Past Performance (5 possible points)

US EPA General Assistance Program grant, successfully completed; Since 1997, the Tule River Tribe has successfully applied for, secured, implemented and managed a General Assistance Program grant. This grant program established and supports the Tribal Department of Environmental Protection. The Tribe has been successful at maintaining good standing with the GAP grant, by adhering to the associated grant guidelines, completing proposed workplan components and commitments and managing expenditures appropriately. The Tribe also adheres to required progress and financial reporting procedures, in accordance with grant guidance.

US EPA CWA 106, Water Pollution Program grants, successfully completed; Since 1999, the Tule River Tribe has successfully applied for, secured, implemented and managed a Clean Water Act, Section 106 Water Pollution Program grant. This grant program established and supports the Tribal Water Pollution Program. The Tribe has been successful at maintaining good standing with the CWA 106 grant, by adhering to the associated grant guidelines, completing proposed workplan tasks and objectives, and managing expenditures appropriately. The Tribe also adheres to required progress and financial reporting procedures, in accordance with grant guidelines.

Bureau of Indian Affairs (BIA), Pier Fire Burn Area Emergency Restoration (BAER) and Burn Area Restoration (BAR) grant, successfully completed; This project was implemented over a three-year period, in response to the 2017 Pier wildland fire which entered the Tule River Reservation. The grant funds supported various forest emergency and follow up restoration efforts. The Tribe was successful at maintaining good standing with the BAER/BAR grant, by adhering to the associated grant guidelines, completing proposed workplan tasks and objectives, and managing expenditures appropriately. The Tribe also adheres to required progress and financial reporting procedures, in accordance with grant guidelines.

USDS Natural Resource Conservation Service (NRCS), Environmental Quality Incentive Program (EQIP), successfully completed; This project was implemented as a “Woody Residue Treatment” project within the Tule River Reservation conifer forest. The Tribe has been successful at maintaining good standing with the NRCS EQIP grant, by adhering to the associated grant guidelines, completing proposed workplan tasks and objectives, and managing expenditures appropriately. The Tribe also adheres to required progress and financial reporting procedures, in accordance with grant guidelines.

B. Reporting Requirements (5 possible points)

For all grant agreements listed below, the Tule River Tribe maintained or maintains good standing. Required quarterly and annual reporting was completed in narrative progress and financial expenditure format. We complied with all applicable grant reporting requirements, including forms and submission procedures and as such all grant agreements were properly closed out at the project period end. Grants include: US EPA General Assistance Program grant, US EPA CWA 106, Water Pollution Program grant, BIA, Pier Fire BAER and BAR grant and USDA NRCS EQIP grant

C. Staff Expertise (5 possible points)

Project Lead Kerri Vera has served as Director for the Department of Environmental Protection there since 1998. Kerri is a Humboldt State University alumni, where she studied Wildlife Biology. In 2001, she was awarded

the EPA Conner Byestewa Jr. Environmental Excellence Award. Currently Kerri serves on the EPA Region 9 Region Tribal Operations Committee as the General Assistance Program Tribal workgroup lead and on of (3) Central CA Tribal Representatives. Kerri developed the Tribal Environmental Department upon the foundation of an EPA GAP grant, and has successfully secured numerous state and federal grants to support environmental protection on the Tule River Indian Reservation. She is currently managing (4) federal grants which support the Tribal Department of Environmental Protection. Since 2001, Kerri has managed the Tribal Water Pollution Control program where she is responsible for coordinating water quality sampling, and overseeing Quality Assurance protocols as approved by EPA. She is also responsible for the efficient storage, assessment and reporting of water quality data for the Tribal community, government and EPA, in accordance with their required format.

Section 7 - Budget

a. PERSONNEL

| POSITION | NUMBER | SALARY | WORK YEARS | AMOUNT |
|---|--------|--------|------------|--------|
| Tribal Department Director, Environmental Protection | 1 | | .20 | |
| Tribal Department Assistant, Environmental Protection | 1 | | .15 | |
| a. PERSONNEL TOTAL | | | | 64,662 |

b. FRINGE BENEFITS

| | |
|---------------------------------|--------|
| BASE | 64,662 |
| RATE | .30 |
| b. FRINGE BENEFITS TOTAL | 19,389 |

c. TRAVEL

| | |
|---|-------|
| Explain: | |
| Training & Travel; Site visit(s) for technical assistance and training purposes for staff | 7,500 |
| Vehicle Fuel for onsite monitoring, training, O&M, community outreach | 1,500 |
| c. TRAVEL TOTAL: | 9,000 |

d. EQUIPMENT:

| ITEM | NUMBER | COST PER UNIT | TOTAL |
|-------------------------------------|--------|---------------|--------|
| Air monitoring equipment & supplies | | | 15,000 |
| d. EQUIPMENT TOTAL | | | 15,000 |

e. SUPPLIES: NA

f. CONTRACTUAL

| | |
|--|---------|
| RTI Partners: includes salaries, indirect costs, travel, technical assistance, data analysis & training | 235,882 |
| Stanford Partners: salaries, indirect costs, travel, materials/supplies, community activities, community assessments | 90,221 |
| Incentives for community participants, stipend for community/youth helpers; additional technical assistance | 36,000 |
| f. CONTRACTUAL TOTAL | 362,083 |

g. CONSTRUCTION N/A

h. OTHER NA

| | |
|--|---------|
| i. TOTAL DIRECT COSTS: | 470,134 |
| j. INDIRECT COSTS: (BASE: 108,051 x RATE: 27.6%) | 29,866 |
| k. TOTAL PROPOSED COSTS: | 500,000 |
| FEDERAL FUNDS REQUESTED: \$ 500,000 | |
| RECIPIENT SHARE OF TOTAL PROPOSED COSTS: N/A | |
| FEDERAL SHARE OF TOTAL PROPOSED COSTS: \$ 500,000 | |